

IN THE CLAIMS:

A complete listing of the claims and their status as of this Amendment is as follows:

1.(Currently amended) An orthopedic brace providing active resistance to axial rotation and translation in a joint comprising at least one circumferentially spiraling, length-adjustable, longitudinally inelastic bracing member having a proximal terminal end positioned on one side of a joint, a distal terminal end positioned on the other side of the joint along a longitudinal axis formed through the joint and a circumferentially spiraling distance extending between said proximal terminal end and said distal terminal end defining a circumference oriented about the joint from said proximal terminal end to said distal terminal end, active resistance to axial rotation and translation of the joint being provided by a change in said circumference responsive to a change in the position of said proximal terminal end relative to said distal terminal end, and being structured with a length adjustment device positioned between said proximal end and said terminal end of said at least one circumferentially spiraling bracing member to provide increased resistance to axial rotation and translation in the joint by selectively adjusting the length of said at least one circumferentially spiraling bracing member when said proximal end and said distal end are fixed in a selected position relative to each other.

2.(Previously presented) The orthopedic brace of claim 1 further comprising a

bracing member support, said proximal terminal end and said distal terminal end being attached to said bracing member support.

3.(Cancelled)

4.(Currently amended) ~~The~~ An orthopedic brace of claim 2 providing active resistance to axial rotation and translation in a joint comprising at least one circumferentially spiraling, length-adjustable, longitudinally inelastic bracing member having a proximal terminal end positioned on one side of a joint, a distal terminal end positioned on the other side of the joint along a longitudinal axis formed through the joint and a circumferentially spiraling distance extending between said proximal terminal end and said distal terminal end defining a circumference oriented about the joint from said proximal terminal end to said distal terminal end, said orthopedic brace further comprising a bracing member support comprising an undersleeve having a proximal edge and a distal edge, said proximal terminal end of said bracing member being attached near said proximal edge of said undersleeve and said distal terminal end of said bracing member being attached near said distal edge of said undersleeve; and wherein active resistance to axial rotation and translation of the joint being is provided by a change in said circumference responsive to a change in the position of said proximal terminal end relative to said distal terminal end ~~wherein said bracing member support further comprises an undersleeve having a proximal edge and a~~

~~distal edge, said proximal terminal end of said bracing member being attached near said proximal edge of said undersleeve and said distal terminal end of said bracing member being attached near said distal edge of said undersleeve.~~

5.(Previously presented) An orthopedic brace providing active resistance to axial rotation and translation in a joint comprising:

an undersleeve sized to encircle at least a portion of a wearer's body and to extend

from one side of a joint to the other side of the joint, said undersleeve having a proximal edge positioned on one side of a joint and a distal edge positioned on the other side of the joint; and

at least one circumferentially spiraling, longitudinally inelastic bracing member having a proximal end and a distal end attached to said undersleeve in proximity to said proximal edge of said undersleeve and said distal edge of said undersleeve, respectively, to define a circumferentially spiraling distance from said proximal end to said distal end thereof.

6.(Original) The orthopedic brace of claim 5 wherein said undersleeve is formed of a material having a coefficient of elasticity and wherein said undersleeve further comprises a proximal portion positioned near said proximal edge of said undersleeve, said proximal portion having a coefficient of elasticity lower than said coefficient of elasticity of said undersleeve.

7.(Original) The orthopedic brace of claim 6 wherein said proximal portion is sized to partially encircle said undersleeve and thereby provide an expansion gap comprising material having a greater coefficient of elasticity than said coefficient of elasticity of said proximal portion.

8.(Original) The orthopedic brace of claim 6 further comprising a first stabilizing strap positioned in alignment with said proximal portion to encircle at least a portion of said proximal portion.

9.(Original) The orthopedic brace of claim 6 wherein said undersleeve further comprises a distal portion positioned near said distal edge of said undersleeve, said distal portion having a coefficient of elasticity lower than said coefficient of elasticity of said undersleeve.

10. (Original) The orthopedic brace of claim 9 wherein said distal portion is sized to partially encircle said undersleeve and thereby provide an expansion gap comprising material having a greater coefficient of elasticity than said coefficient of elasticity of said distal portion.

11.(Previously presented) The orthopedic brace of claim 10 further comprising a stabilizing strap positioned in alignment with said distal portion to encircle at least a

portion of said distal portion.

12.(Original) The orthopedic brace of claim 9 wherein at least one of said proximal portion or said distal portion is positioned and configured to serve as a bracing member support for attachment of said at least one bracing member thereto.

13.(Original) The orthopedic brace of claim 5 wherein said undersleeve further comprises a closeable opening extending from said proximal edge of said undersleeve toward said distal edge thereof.

14 (Original) The orthopedic brace of claim 13 wherein said closeable opening is a zipper.

15.(Original) The orthopedic brace of claim 13 further comprising at least one connecting device attached to said undersleeve and positioned in proximity to said closeable opening.

16.(Original) The orthopedic brace of claim 13 further comprising a stabilizing strap connected to said undersleeve in proximity to said proximal edge of said undersleeve and oriented to be positionable over said closeable opening to substantially fix the circumference of said undersleeve.

17.(Original) The orthopedic brace of claim 16 wherein said undersleeve further comprises a closeable opening extending from said distal edge thereof and further comprising a stabilizing strap connected to said undersleeve in proximity to said distal edge of said undersleeve and oriented to be positionable over said closeable opening in said distal edge to substantially fix the circumference of said undersleeve.

Claims 18 and 19 (Cancelled)

20.(Currently amended) A method of limiting axial rotation and translation in a joint comprising:

providing an orthopedic brace configured to actively resist axial rotation and translation

in a joint, said brace comprising a bracing member support and at least one circumferentially spiraling, length-adjustable bracing member attached to said bracing member support, said at least one circumferentially spiraling bracing member having a proximal end for positioning on one side of a joint, a distal end for positioning on the other side of the joint along a longitudinal axis formed through the joint and a circumferentially spiraling distance extending between said proximal end and said distal end defining a circumference oriented about the joint from said proximal end to said distal end, and having a length adjustment device positioned between said proximal end and said terminal end of said at least one circumferentially spiraling bracing member;

positioning said orthopedic brace about a joint to extend said at least one bracing member from one side of the joint to the other side of the joint;
establishing said circumferentially spiraling distance between said proximal end and said distal end of said bracing member to define a plane of motion;
selectively increasing active resistance to axial rotation and translation in the joint by selectively adjusting said length adjustment device of said at least one circumferentially spiraling distance by selectively adjusting the length of said length-adjustable bracing member between when said proximal end and said distal end to provide active resistance to rotation and translation in the joint are fixed relative to each other.

21.(Currently amended) An orthopedic brace providing active resistance to axial rotation and translation in a joint comprising a bracing member support and at least one circumferentially spiraling, length-adjustable bracing member having a proximal end releasably attached to said bracing member support for positioning on one side of a joint, a distal end releasably attached to said bracing member support for positioning on the other side of the joint along a longitudinal axis formed through the joint and a circumferentially spiraling distance extending between said proximal end and said distal end defining a circumference oriented about the joint from said proximal end to said distal end, active resistance to axial rotation and translation of the joint being provided by a change in said circumference responsive to a change in the position of said

proximal end relative to said distal end, and being structured with a length adjustment device positioned between said proximal end and said terminal end of said at least one circumferentially spiraling bracing member to provide increased resistance to axial rotation and translation in the joint by selectively adjusting the length of said at least one circumferentially spiraling bracing member when said proximal end and said distal end are fixed in a selected position relative to each other .

22.(Currently amended) An orthopedic brace providing active resistance to axial rotation and translation in a joint comprising at least one circumferentially spiraling, length-adjustable, longitudinally inelastic bracing member, having a proximal end positioned on one side of a joint, a distal end positioned on the other side of the joint along a longitudinal axis formed through the joint and a circumferentially spiraling distance extending between said proximal end and said distal end defining a circumference oriented about the joint from said proximal end to said distal end, said at least one circumferentially spiraling bracing member being sized in length to spiral unidirectionally from one side of the joint to the other side of the joint, and wherein active resistance to axial rotation and translation of the joint ~~being~~ is initially provided by a change in said circumference responsive to a change in the position of said proximal end relative to said distal end of said circumferentially spiraling bracing member and said at least one circumferentially spiraling bracing member is structured with a length adjustment device positioned between said proximal end and said terminal end of said

at least one circumferentially spiraling bracing member to provide increased resistance to axial rotation and translation in the joint by selectively adjusting the length of said at least one circumferentially spiraling bracing member when said proximal end and said distal end are fixed in a selected position relative to each other.